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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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06/27/2006

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EXAMINER

LEE, PHILIP C

ART UNIT

PAPER NUMBER

2152

DATE MAILED: 06/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/862,410	SHAO ET AL.	
	Examiner	Art Unit	
	Philip C. Lee	2152	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 19-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 19-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)     | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

1. This action is responsive to the amendment and remarks filed on April 17, 2006.
2. Claims 1-13 and 19-35 are presented for examination and claims 14-18 are canceled.
3. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

*Claim Rejections – 35 USC 112*

4. Claims 6-11 and 19-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
  - a. Claim language in the following claims is not clearly understood:
    - i. “mouse clicking, mouse moving, fast forward, fast backward, object zoom-in, object zoom-out, add or delete”, claim 7, lines 2-4, claim 20, lines 2-3, claim 33, lines 2-3, claim 34, lines 2-3 and claim 35, lines 2-3. It is unclear how “mouse clicking, etc.” is related to the method claimed, if mouse clicking on the content information, or if mouse clicking different content information from other session, and how “mouse clicking” affecting the method claimed, if mouse clicking is requesting additional content information;

- ii. “one prioritizing parameter associated with a monitored performance of the network”, claim 8, Line 4. It is unclear if the prioritizing parameter here is the same or related to the ones before, and if the performance is monitored by the "a user" as in claim 6, or by a third entity contributing to the prioritizing parameters;
- iii. “collaborator logic...the user interaction”, claim 19, lines 4-11. The collaborator logic receives two prioritizing parameters, the first is associated with application communicating the content information and the second is associated with a user interaction. The collaborator logic is operatively coupled with a packetizer logic from one side and a priority mapping logic from another side. First, it is unclear if the first prioritizing parameter is outputted with the packets of content information received from the packetizer logic.
- iv. “one prioritizing parameter associated with the network performance”, claim 21, lines 4-5. It is unclear how this is related to “one or more prioritizing parameters associated with a user interaction”, claim 19, line 7, are they the same parameters, is the user interacting through the network monitoring logic, or the user and the network monitoring logic are different and feeding different prioritizing parameters;
- i. “selectively aggregate content information”, claim 25, line 12. It is unclear what are the components of the content information that is aggregated, why the content information need to be aggregated, and on what basis the content information is being aggregated, in order to understand the meaning of “selectively”.

5. Claims 1-13 and 19-35 are rejected under 35 U.S.C. 102(e)/103(a) as being anticipated by /unpatentable over Aharoni et al. (US 6,014,694), hereafter "Aharoni"
6. Aharoni was cited in the previous office action.
7. As to claim 1, Aharoni discloses the invention as claimed including a method comprising; compressing video objects (col. 2, lines 15-16; 14, 16, Fig. 1; and 212, Fig. 15); generating at least one corresponding elementary stream comprising the compressed video objects (col. 2, lines 29-35; Fig. 4; and 214, Fig. 15) as affected by at least one user interaction via a remote device that is operatively coupled across a network (col. 19, lines 14-21; 220, fig. 15); classifying information within each elementary stream based on importance (col. 2, lines 29-31; and col. 9, lines 57-62) and responsive to the compressed video objects (col. 9, lines 57-62); and assembling the classified information into packets associated with different classes of network packets (col. 2, lines 56-62; and col. 7, line 67 to col. 8, line 1) that belong to a single session (col. 19, lines 14-21).
8. Aharoni's disclosure talks about raw video and data objects in several places . However, Aharoni discloses that any suitable method of video compression can be utilized to process the raw video data such as described in connection with MPEG-I, MPEGQ, or MPEG-4 standards (col. 6, lines 56-59; and col. 18, lines 39-42). It is well known in the art that MPEG-4 standards are object-based (e.g. "MPEG4 Video Verification Model" reference is cited by the applicant in

the parent application 09/464,671). This basically means that Aharoni's raw data are video objects and Aharoni's data objects are video objects.

9. As to claim 6, the claim is rejected for the same reasons as claim 1 above. In addition, Aharoni discloses a method comprising: packetizing content information (col. 7, lines 60-62); generating resource coordination information based at least in part on at least one prioritizing parameter associated with an application communicating the content information (col. 8, lines 2-23) and on one or more prioritizing parameters associated with a user interaction (col. 19, lines 14-21) via a remote device that is operatively coupled to a network (220, fig. 15); selectively associating each packet of content information with a service class selected from among at least two different service classes based on the resource coordination information (col. 8, lines 2-23; and col. 9, lines 57-62); selectively outputting at least one packet of content information based on a priority associated with the service class associated with the packet of content information (col. 8, lines 2-23 and col. 9, lines 57-62); and providing the at least one packet of content information to a network (col. 8, lines 6-7).

10. As to claim 12, the claim is rejected for the same reasons as claim 6 above. In addition, a computer-readable media comprising computer instructions for performing acts comprising: generating prioritization information based at least in part on at least one parameter associated with an application streaming media information and on one or more prioritizing parameters associated with a user interaction (col. 19, lines 14-21) via a remote device that is operatively coupled to a network (220, fig. 15); associating packets of the media information

with a service class selected from a plurality of different service classes based on the prioritization information; and selectively outputting from sending computing device onto the network some of the packets of media information based on their respective service classes, is inherent in Aharoni's disclosure. Moreover, Aharoni discloses selectively discarding a portion of the packets of the media information in accordance with an adaptive rate control mechanism at a sending computing device (col. 3, lines 46-60; and col. 12, lines 42-55).

11. As to claim 19, the claim is rejected for the same reasons as claims 1 and 6 above. In addition, Aharoni discloses an apparatus comprising; packetizer logic configured to receive encoded content information and output corresponding packets of content information (col. 7, line 67 to col. 8, line 17; and Fig. 2); collaborator logic operatively coupled to the packetizer logic and configured to receive at least one prioritizing parameter associated with at least one application, including an application communicating the content information (18, Fig. 2 ) and one or more prioritizing parameters associated with a user interaction (col. 7, line 62 to col. 8, line 16; and col. 19, lines 15-21) via a remote device that is operatively coupled to a network (220, fig. 15) and output resource coordination information associated based at least in part on the at least one prioritizing parameter associated with the application (col. 8, lines 2-23., and Fig. 2); priority mapping logic operatively coupled to the collaborator logic and configured to receive the packetized content information and the resource coordination information, and selectively associate each received packet of content information with a service class selected from among at Least two different service classes based on the resource coordination information, and selectively output at least one packet of content information based on a priority associated with



each service class (col. 8, lines 2-23; Fig. 2., and col. 9, lines 57-62); and forwarder logic operatively coupled to the priority mapping logic and configurable to provide the at least one packet of content information to the network (col. 8, lines 6-7; and Fig. 2).

12. As to claim 25, the claim is rejected for the same reasons as claims 1, 6, and 19 above. In addition, Aharoni discloses a system comprising: a network environment (Fig. 15) including a backbone network (218, Fig. 15), and a first access network (216, Fig. 15) and a second access network (220, Fig. 15; and col. 18, lines 15-16) each being operatively coupled to the backbone network; a plurality of host devices including a first host device operatively coupled to the first access network (218, Fig. 15) and a second host device operatively coupled to the second access network, the second host device receiving a user interaction (col. 19, lines 14-21); an application-aware resource controllers (222, Fig. 15).

13. Aharoni discloses one application-aware resource controller (222, Fig. 15) which function to determine and control the bandwidth for a particular network connection (col. 21, lines 34-36). It would have been obvious to one skilled in the art at the time of the invention to utilize a plurality of these application-aware resource controller in the system in order to cover more than network connections.

14. As to claim 2, Aharoni does not explicitly spell out the video data as shape, motion, and texture information. However, Aharoni discloses assigning different priority levels for multiple



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types of frames comprised of video data which may include shape, motion, and texture information (col. 9, lines 57-62).

15. As to claim 3, Aharoni does not explicitly disclose selectively multiplexing a plurality of the network packets with the same priority level into an application level packet. However, it would have been obvious to one skilled in the art at the time of the invention that a client would receive a subset of the levels chosen to have suitable data content to match that of the network connection or the client by multiplexing a prioritized video data stream comprising multiple levels (col. 2, lines 28-35).

16. As to claim 4, Aharoni does not explicitly disclose arranging the content of at least one of the network packets in an interleaving fashion. However, it is well known in the art, and would have been obvious to one skilled in the art at the time of the invention that arranging the contents of the packet in an interleaving fashion would speed up the packet assembly and would as a result enhance the fast transcoding process.

17. As to claim 5, Aharoni discloses the different classes of network packets are associated with the network, which provides differentiated services (Diff- Serv) such that an adaptive transmission environment is implemented for multimedia communications using scalable coding technology (col. 2, lines 10-12,44-46; and col. 7, lines 35-42).

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18. As per claims 7, 20, and 33-35, Aharoni discloses calculating optimum compression level from user interaction of returned acknowledgments and statistics (col. 19, lines 14-21). It would have been obvious to one skilled in the art at the time of the invention to include mouse clicking, mouse moving, fast forward, fast backward, object zoom-in, object zoom-out, add or delete, or any user interaction that affect the rate of receiving returned acknowledgments and statistics in order to calculate the optimum compression level. User interaction such as fast-forwarding on a streaming video, or mouse clicking to start another streaming video session will consume part of the available bandwidth in a connection. This will cause the rate of the returning packets (acknowledgment or statistics) to change.

19. As to claim 8, Aharoni discloses generating the resource coordination information based at least in part on at least one prioritizing parameter associated with a monitored performance of the network (col. 8, lines 2-23).

20. As to claims 9, 10, 22, and 23, Aharoni discloses encoding initial content information as the encoded content information, and segmenting raw video data into a plurality of video objects and wherein at least one of the video objects is included in the initial content information (col. 2, lines 56-59; and col. 7, lines 49-51).

21. As to claims 11, 13, 24, and 31, Aharoni discloses the content information includes

data representing media information selected from a group comprising video information, audio information, image information, and textual information (col. 1, lines 12-17., and col. 2, lines 15-16).

22. As to claim 21, Aharoni discloses network monitoring logic operatively coupled to the collaborator logic and configurable for use with the network and in monitoring network performance, and to output at least one prioritizing parameter associated with the network performance (col. 2, lines 56-63; and col. 13, lines 11-13), and the collaborator logic is further configured to receive the at least one prioritizing parameter associated with the network performance, and output the resource coordination information based at least in part on the at least one prioritizing parameter associated with the network performance (col. 8, lines 2-23; and Fig. 2).

23. As to claim 26, Aharoni discloses at least the first application-aware resource controller is configured to selectively adapt a flow rate associated with the content information based on an identified state of at least one of the first access network, the second access network, or the backbone network (222, Fig. 15).

24. As to claim 27, Aharoni discloses at least the first application-aware resource controller is configured to selectively adapt a flow rate to associated with the content information based on at least one identified requirement of the second host device (col. 7, lines 7-15; and col. 8, lines 8-17).

25. As to claim 28, Aharoni discloses at least the first application-aware resource controller is configured to controllably handle the content information per application-based signaling, and to operatively associate a priority with the at least one service class (col. 8, lines 8-23; and col. 9, lines 57-62).

26. As to claim 29, Aharoni discloses associating a respective priority with each respective service class of the at least two service classes (col. 2, lines 29-31, 56-62; col. 7, line 67 to col. 8, line 1; and col. 9, lines 57-62).

27. As to claims 30 and 32, Aharoni discloses at least one processing agent operatively configured within the backbone network and configured to selectively filter the aggregated information associated with different communication sessions based on identified bandwidth constraints and service classes, and implement packet-level fast transcoding and related signaling (col. 10, Lines 33-48; and col. 11, lines 53-56).

28. Claim 1 is further rejected under 35 U.S.C. 102(e)/103(a) as being anticipated by /unpatentable over McCanne et al. (Receiver-driven Layered Multicast, ACM SIGCOMM'96, August 96), hereinafter "McCanne".

29. McCanne is cited by the applicant in the parent application.

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30. As to claim 1, McCanne discloses the invention substantially as claimed including a method comprising compressing video objects (page 1, right col., last parag.); generating at least one corresponding elementary stream comprising the compressed video objects (page 1, right col., last parag.); classifying information within each elementary stream based on importance and responsive to the compressed video objects (inherent in Page 3, left col., 2<sup>nd</sup> parag.) as affected by at least one user interaction via a remote device that is operatively coupled across a network (page 3, right col., parags 1 and 3); and assembling the classified information into packets associated with different classes of network packets (inherent in Page 3, left col., 2<sup>nd</sup> parag; page 2. right parag., last two parags.).

31. McCanne's disclosure talks about real-time, multimedia applications and receiving higher rate, higher quality video (page 1, right col., 2nd parag.). It is well known in the art that multimedia standards are object-based (e.g. "MPEG4 Video Verification Model" reference is cited by the applicant in the parent application 09/464,671). This basically means that McCanne's data are video objects.

32. Claim 12 is further rejected under 35 U.S.C. 103(a) as being unpatentable over McCanne in view of Borella et al. (US 6,587,433), hereinafter "Borella".

33. As to claim 12, the claim is rejected for the same reasons as claim 1 above. In addition, a computer-readable media comprising computer instructions for performing acts comprising generating prioritization information based at Least in part on at least one parameter associated

with an application streaming media information and on one or more prioritizing parameter associated with a user interaction via a remote device that is operatively coupled to a network is inherent in McCanne's disclosure. Moreover, McCanne discloses selectively discarding a portion of the packets of the media information in accordance with an adaptive rate control mechanism at a sending computing device ( page 3, left col. 2<sup>nd</sup> Parag.) and prioritization resulting from receiver interaction feedback (receiver's subscription) (page 3, right col. Parags. 1 and 3).

34. McCanne does not disclose associating packets of the media information with a service class selected from a plurality of different service classes based on the prioritization information; and selectively outputting from the sending computing device onto the network some of the packets of media information based on their respective service classes. Providing service classes to packets of media information is well known in the art. Applicant's specification (page 2, lines 14-20) discloses that differentiated services gives a class-based solution to support a relative QoS, wherein packets can be divided into different QOS classes and forwarded at different priorities. Being highly scalable and relatively simple, the differentiated services model may come to dominate the backbone of the next generation of the Internet. Borella, cited here as an example, discloses implementation of differential packet delivery service (col. 2, lines 20-65). It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of McCanne and Borella in order to support a relative QOS in McCanne's system that is highly scalable and relatively simple.

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35. Claims 6, 19, and 25 are further rejected under 35 U.S.C. 102(e) as being anticipated by Gai et al. (US 6,651,101), herein after "Gai".

36. As to claim 6, Gai discloses the invention as claimed including a method comprising packetizing content information (col. 3, line 65 to col. 4, Line 3); generating resource coordination information based at Least in part on at Least one prioritizing parameter associated with an application communicating the content information (col. 2, Line 56- col. 3, Line 32; and col. 4, Line 36-37) and on one or more prioritizing parameters associated with a user interaction (col. 4, Lines 10-18, 37-38) via a remote device that is operatively coupled to a network (212, fig. 2; col. 8, lines 15-17; col. 7, lines 53-56); selectively associating each packet of content information with a service class selected from among at Least two different service classes based on the resource coordination information ( col. 5, Lines 25-30); selectively outputting at Least one packet of content information based on a priority associated with the service class associated with the packet of content information and providing the at Least one packet of content information to a network (col. 4, Lines 56-65 ).

37. As to claim 19, the claim is rejected for the same reasons as claim 6 above. In addition, Gai discloses an apparatus comprising packetizer logic configured to receive encoded content information and output corresponding packets of content information (col. 3, Line 65 to col. 4, Line 3); collaborator logic operatively coupled to the packetizer logic and configured to receive at Least one prioritizing parameter associated with at Least one application, including an application communicating the content information (col. 2, Line 56- col. 3, Line 32; and col. 4,



Line 36-37) and one or more prioritizing parameters associated with a user interaction (col. 4, Lines 10-18, 37-38) via a remote device that is operatively coupled to a network (212, fig. 2; col. 8, lines 15-17; col. 7, lines 53-56) and output resource coordination information based at Least in part on the at Least one prioritizing parameter associated with the application (col. 10, Lines 8-10); priority mapping logic operatively coupled to the collaborator logic and configured to receive the packetized content information and the resource coordination information, and selectively associate each received packet of content information with a service class selected from among at Least two different service classes based on the resource coordination information, and selectively output at Least one packet of content information based on a priority associated with each service class (col. 5, Lines 25-30); and forwarder logic operatively coupled to the priority mapping logic and configurable to provide the at Least one packet of content information to a network (col. 4, Lines 56-65).

38. As to claim 25, Gai discloses the invention as claimed including above a system comprising a network environment including a backbone network , and a first access network and a second access network , each being operatively coupled to the backbone network (col. 1, Line 29 to col. 2, Line 35; and Fig. 2); a plurality of host devices including a first host device operatively coupled to the first access network and a second host device operatively coupled to the second access network ( e.g. 222, Fig. 2), the second host device receiving a user interaction (col. 8, lines 15-17; col. 7, lines 53-56); application-aware resource controllers (208, 210, Fig. 2 ) configured to selectively aggregate content information associated with at least one communication session established between two hosts (col. 6, Lines 42-57), and to map the

aggregated information to at Least two service classes based at least in part on one or more prioritizing parameters associated with the user interaction( 216, Fig. 2; and col. 8, lines 15-17; col. 7, lines 53-56).

39. Applicant's arguments filed 4/17/2006 have been fully considered but they are not persuasive. Therefore, rejection of claims 1-13 and 19-32 is maintained.

40. In the remarks, applicants argued in substance that none of the prior art of record teaches prioritizing parameter associated with a user interaction via a remote device that is operatively coupled to a network.

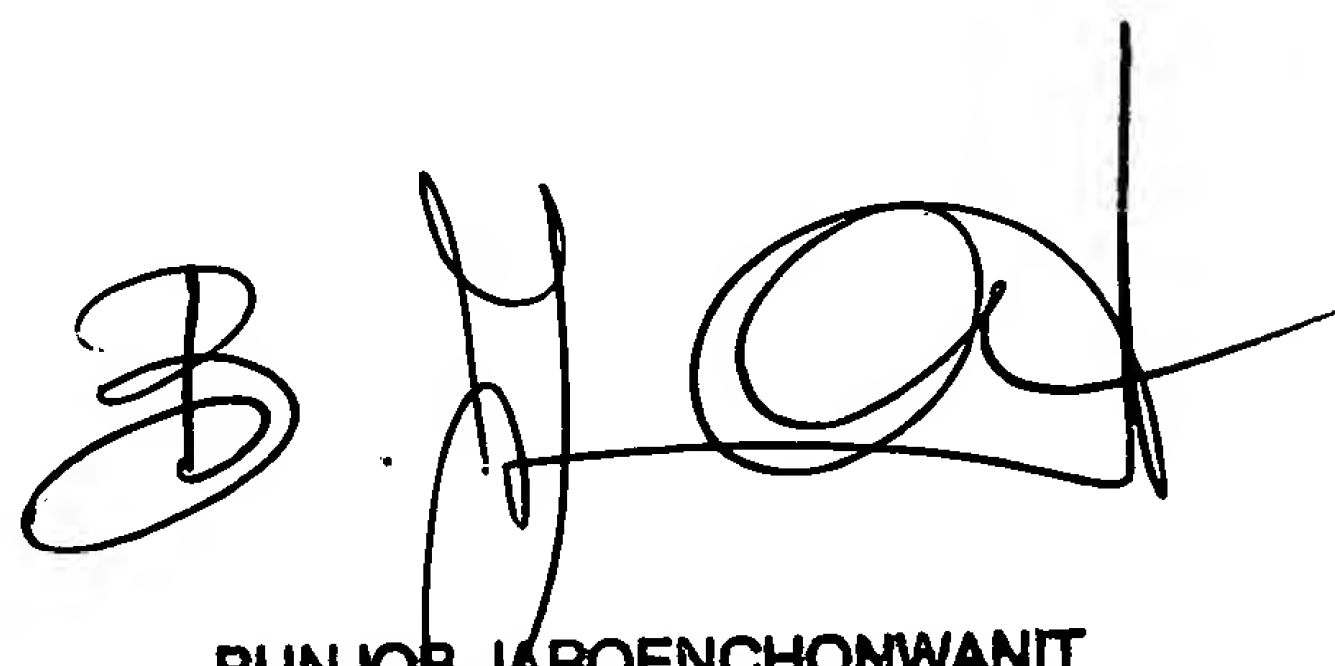
41. Examiner respectfully traverses applicants' remarks.

42. Aharoni discloses prioritization resulting from user interaction feedback (col. 7, line 60- to col. 8, line 17; and col. 19, lines 15-21) via a client device that is operatively coupled to a network (220, fig. 15). McCanne discloses compressed video objects (inherent in Page 3, left col., 2<sup>nd</sup> parag.) as affected by at least one user interaction via a remote device that is operatively coupled across a network (page 3, right col., parags 1 and 3). Gai discloses prioritizing parameters associated with a user interaction (col. 4, Lines 10-18, 37-38) via a remote device that is operatively coupled to a network (212, fig. 2; col. 8, lines 15-17; col. 7, lines 53-56).

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43. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Lee whose telephone number is (571) 272-3967. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Philip Lee



**BUNJOB JAROENCHONWANIT**  
**SUPERVISORY PATENT EXAMINER**